This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Original) A method of characterising a target base in a sample nucleic acid, which method comprises:

(a) contacting the sample nucleic acid with an oligonucleotide primer under conditions which allow hybridisation of the oligonucleotide to the sample nucleic acid, said oligonucleotide primer being labelled with a fluorophore;

(b) contacting the sample nucleic acid with a deoxynucleotide or dideoxynucleotide which is labelled with a fluorophore, under conditions which allow extension of the oligonucleotide primer through incorporation of the labelled nucleotide; and

(c) measuring the fluorescence emitted by one or both of the fluorophores.

2. (Original) A method according to claim 1, wherein one fluorophore can act as a donor and the other fluorophore can act as an acceptor.

3. (Currently amended) A method according to claim 1 ~~or 2~~ wherein the oligonucleotide primer fluorophore acts as a donor and the nucleotide fluorophore acts as an acceptor.

4. (Currently amended) A method according to claim 1 ~~or 2~~ wherein the oligonucleotide primer fluorophore acts as an acceptor and the nucleotide fluorophore acts as a donor.

5. (Currently amended) A method according to claim 2 ~~any one of claims 2 to 4~~ wherein fluorescence resonance energy transfer can take place between the donor and the acceptor fluorophore when the primer is extended by incorporation of the labelled nucleotide.

6. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 5~~ wherein step b) further comprises contacting the sample with a DNA polymerase and carrying out a thermo-cycling reaction.

7. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 6~~ wherein step c) comprises irradiating the sample nucleic acid and measuring the fluorescence emitted by one or both of the fluorophores.

8. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 7~~ wherein the fluorescence emitted by the fluorophore of the oligonucleotide primer is recorded.

9. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 8~~ wherein the fluorescence emitted by the fluorophore of the deoxynucleotide or dideoxynucleotide is recorded.

10. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 9~~ wherein the primer is designed such that the 3' end of the primer hybridises immediately upstream of the target base.

11. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 10~~ wherein the labelled nucleotide is a dideoxynucleotide.

12. (Curently amended) A method according to claim 1 ~~any one of claims 1 to 11~~ wherein a plurality of target bases are characterised.

13. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 11~~ wherein only one species of labelled primer is used in step a) and only one species of labelled nucleotide is used in step b).

14. (Original) A method according to claim 12 wherein one species of labelled primer and a plurality of different species of labelled nucleotides are used.

15. (Original) A method according to claim 14 wherein each species of nucleotide is labelled with a different type of fluorophore.

16. (Original) A method according to claim 12 wherein a plurality of different species of labelled primers and one species of labelled nucleotide are used.

17. (Original) A method according to claim 16 wherein each species of primer is labelled with a different type of fluorophore.

18. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 17~~ wherein the fluorescence emission maxima of the two fluorophores are at least 15 nm apart.

19. (Original) A method according to claim 18 wherein the fluorescence emission maxima of the two fluorophores are at least 30 nm apart.

20. (Currently amended) A method according to claim 1 ~~any one of claims 1 to 19~~ wherein the wavelength of the light used for irradiation is such that the light is only efficiently absorbed by the donor and direct excitation of the acceptor is negligible.

21. (Currently amended) A kit for use in a method according to claim 1 ~~any one of claims 1 to 20~~, which kit comprises:

a) an oligonucleotide primer labelled with a fluorophore;

b) a deoxynucleotide or dideoxynucleotide labelled with a fluorophore; and optionally;

c) a polymerase.